

WHAT IS CLAIMED IS:

1. A fixing apparatus comprising:
  - a heat roller;
  - an induction heating coil arranged along an axial
  - 5 direction of the heat roller;
  - a resonance circuit composed of the coil;
  - a switching element for exciting the resonance circuit;
  - an oscillator outputting on/off signals for
  - 10 driving on and off the switching element;
  - a thermostat opening and closing in accordance with a temperature of the coil; and
  - a relay through which an operating current flows via the thermostat, the relay having a contact being
  - 15 inserted and connected to a conduction path of on/off signals supplied from the oscillator to the switching element.
2. A fixing apparatus according to claim 1, wherein the thermostat has a small heat capacity.
- 20 3. A fixing apparatus according to claim 1, wherein the thermostat has a small heat capacity, and opens and closes in accordance with a temperature of an approximately middle portion along the axial direction of the heat roller.
- 25 4. A fixing apparatus according to claim 1, wherein the thermostat includes:
  - a first thermostat, which has a small heat

capacity, and opens and closes in accordance with a temperature of an approximately middle portion along the axial direction of the heat roller; and

5 a second thermostat, which has a small heat capacity, and opens and closes in accordance with a temperature of one or the other end portion along the axial direction of the heat roller.

5. An image forming apparatus including the fixing apparatus described in claim 1, comprising:

10 a freely opening and closing cover provided on a main body of the image forming apparatus; and

a switch opening and closing in accordance with opening and closing of the cover, and being inserted and connected to the conduction path to the relay.

15 6. A fixing apparatus comprising:

a heat roller;

a coil arranged along an axial direction of the heat roller;

a resonance circuit composed of the coil;

20 a first switching element for exciting the resonance circuit;

a thermostat opening and closing in accordance with a temperature of the coil;

25 a second switching element forming a conduction path for driving the first switching element together with the thermostat; and

an oscillator outputting on/off signals for

driving on and off the second switching element.

7. A fixing apparatus according to claim 6, wherein the thermostat has rated voltage of 30 V or less and rated current of 1 A or less.

5           8. A fixing apparatus according to claim 6, wherein the thermostat has a small heat capacity, and opens and closes in accordance with a temperature of an approximately middle portion along the axial direction of the heat roller.

10           9. A fixing apparatus according to claim 6, wherein the thermostat includes:

            a first thermostat, which has a small heat capacity, and opens and closes in accordance with a temperature of an approximately middle portion along  
15           the axial direction of the heat roller; and

            a second thermostat, which has a small heat capacity, and opens and closes in accordance with a temperature of one or the other end portion along the axial direction of the heat roller.

20           10. An image forming apparatus including the fixing apparatus described in claim 6, comprising:

            a freely opening and closing cover provided on a main body of the image forming apparatus; and

            a switch opening and closing in accordance with  
25           opening and closing of the cover, and forming a conduction path for driving the first switching element together with the thermostat and the second switching

element.

11. An image forming apparatus comprising:

a heater including a conductive member;

a coil arranged adjacent to the heater;

5 a resonance circuit composed of the coil;

a first switching element for exciting the  
resonance circuit;

an oscillator outputting on/off signals for  
driving on and off the first switching element;

10 a control circuit controlling at least said  
oscillator; and

a second switching element forming a conduction  
path for driving the first switching element;

15 the control circuit driving on and off the second  
switching element.